Three Mile Island Unit 1 PSDAR

The Post-Shutdown Decommissioning Activities Report provides a description of the planned decommissioning activities and potential environmental impacts, along with a schedule and cost estimate for their accomplishment.

Type of Decommissioning Selected

- Exelon Generation selected SAFSTOR, also known as deferred dismantling
- SAFSTOR allows a nuclear facility to remain in a monitored condition for a period of time, after which the property can be decontaminated and released for other uses.
- Two other options for decommissioning exist:
  - ENTOMB: Permanently encase radioactive contaminants in concrete
  - DECON: Immediately dismantle the facility
- The SAFSTOR option provides a safer environment for our decommissioning workforce by allowing additional time for normal radioactive decay, which results in less waste and lower radiation exposure

Decommissioning Schedule

- All dates are approximate
- **2019:**
  - Final shutdown: Sept. 2019
  - Used fuel in spent fuel pool: Sept. 30, 2019
- **2022:** Fuel moves to dry cask storage
- **2074:** Dismantle large components, like cooling towers
- **2078:** All radioactive material safely stored or removed from station

Staffing Plan

- Some workers will remain on site for the first few years after the plant is shut down to work through the process of draining plant systems and removing fuel
- A smaller workforce will remain at the site until the plant is decommissioned
- The number of individuals needed at the site depends on decommissioning activity timing
  - Shortly after used fuel is moved to the spent fuel pool, TMI Unit 1 staffing is reduced to 300 employees
  - Staffing is reduced to 200 in 2021 and about 50 in 2022
- No new contract resources will be needed for the shutdown outage
- The number of workers during the decommissioning phases is expected to be considerably less than the current onsite workforce and well below the temporary workers during refueling outages

Decommissioning Cost

- The TMI Unit 1 decommissioning trust fund should fully cover the cost of decommissioning
- If there were a shortfall in the fund, Exelon would be responsible for the rest
- Decommissioning is expected to cost around $1.2 billion

PSDAR Report

- Required as part of the NRC Decommisioning process
- More than 40 pages, detailing decommissioning activities, schedule and costs along with environmental, historical and socio-economic impacts of decommissionoing

Used Fuel

Dry cask storage is a technology that places used fuel in containers made of stainless steel and concrete, requiring only natural air circulation and little maintenance

The storage facility is highly secured, and the casks are impervious to weather and ground or air attack. Further, casks are very heavy and not easily moved

TMI Unit 1 spent fuel can be housed in 46 canisters, about the size of a football field

The dry cask storage facility will be built to withstand a 100-year flood

TMI must build a dry cask storage facility in order to decommission; until 2022 fuel will remain in the spent fuel pool on site